CLAIMS

What is claimed is:

1. 1. A method for retrieving instructions from memory utilizing a texture module
2. in a graphics pipeline, comprising:
3. (a) sending an instruction request to memory utilizing a texture module in a
4. graphics pipeline; and
5. (b) receiving instructions from the memory in response to the instruction request
6. utilizing the texture module in the graphics pipeline.

1. 2. The method as recited in claim 1, and further comprising sending a texture
2. request to memory utilizing the texture module in the graphics pipeline.

1. 3. The method as recited in claim 2, and further comprising receiving texture
2. information from the memory in response to the texture request utilizing the
3. texture module in the graphics pipeline.

1. 4. The method as recited in claim 1, wherein the memory includes a frame
2. buffer.

1. 5. The method as recited in claim 4, wherein the memory includes direct
2. random access memory (DRAM).

1. 6. The method as recited in claim 3, wherein the instructions are adapted for
2. controlling a texture environment module coupled to the texture module.

1. 7. The method as recited in claim 6, wherein the instructions control the manner
2. in which the texture environment module processes the texture information.

1   8.   The method as recited in claim 1, and further comprising receiving initial
2   instructions from a rasterizer module coupled to the texture module.

1   9.   The method as recited in claim 8, wherein the initial instructions control at
2   least the sending of the instruction request by the texture module.

1   10.   The method as recited in claim 3, and further comprising temporarily storing
2   the instructions and the texture information in cache.

1   11.   The method as recited in claim 10, wherein the cache is resident on the
2   texture module.

1   12.   The method as recited in claim 3, wherein each piece of texture information
2   and each of the instructions are of a similar size in the memory.

1   13.   The method as recited in claim 3, and further comprising controlling the
2   texture module utilizing a shader module coupled thereto.

1   14.   The method as recited in claim 13, wherein the shader module controls the
2   sending of the instruction request and the texture request by the texture
3   module.

1   15.   The method as recited in claim 13, wherein the shader module processes a
2   plurality of pixels with the texture information based on the instructions.

1   16.   The method as recited in claim 15, wherein the shader module is capable of
2   reusing the texture information in order to request further texture information
3   from the memory.

1   17.   The method as recited in claim 15, and further comprising ceasing the
2   processing upon the receipt of a terminate instruction.

1   18.   The method as recited in claim 1, wherein a complete instruction set is
2   received in response to the instruction request.

1   19.   The method as recited in claim 1, wherein a partial instruction set is received
2   in response to the instruction request.

1   20.   The method as recited in claim 19, and further comprising repeating (a) – (b)
2   in accordance with the instructions.

1   21.   The method as recited in claim 1, wherein (a) – (b) are carried out in
2   accordance with the instructions received in response to the instruction
3   request.

1   22.   The method as recited in claim 1, wherein the texture module is adapted for
2   operating in a plurality of different modes.

1   23.   The method as recited in claim 22, wherein the instructions are received in a
2   predetermined one or more of the different modes.

1   24.   A computer program product for retrieving instructions from memory
2   utilizing a texture module in a graphics pipeline, comprising:
3   (a)   computer code for sending an instruction request to memory utilizing a
4   texture module in a graphics pipeline; and
5   (b)   computer code for receiving instructions from the memory in response to the
6   instruction request utilizing the texture module in the graphics pipeline.

1   25.   A system for retrieving instructions from memory utilizing a texture module
2   in a graphics pipeline, comprising:
3   (a)   means for sending an instruction request to memory; and

4   (b)   means for receiving instructions from the memory in response to the

5   instruction request.

1   26.   A texture module for retrieving instructions from memory capable of

2   carrying out a method, comprising:

3   (a)   sending an instruction request to memory; and

4   (b)   receiving instructions from the memory in response to the instruction request.

1   27.   A data structure stored in a frame buffer of a graphics pipeline for allowing

2   the retrieval of instructions utilizing a texture module coupled thereto,

3   comprising an instruction object stored in the frame buffer for being retrieved

4   therefrom in response to an instruction request utilizing a texture module in a

5   graphics pipeline.

1   28.   A method for retrieving instructions from memory, comprising:

2   (a)   receiving a plurality of preliminary instructions from a rasterizer module

3   utilizing a texture module coupled thereto;

4   (b)   sending an instruction request to memory utilizing the texture module;

5   (c)   receiving additional instructions from the memory in response to the

6   instruction request utilizing the texture module;

7   (d)   caching the additional instructions on the texture module;

8   (e)   sending a texture request to memory utilizing the texture module in

9   accordance with the additional instructions;

10   (f)   receiving texture information from the memory in response to the texture

11   request utilizing the texture module;

12   (g)   caching the texture information on the texture module; and

13   (h)   repeating (b) – (g) in accordance with the additional instructions.

1   29.   A method for retrieving instructions from memory, comprising:

2   (a)   receiving a plurality of preliminary instructions from a rasterizer module

3   utilizing a shader module coupled thereto;

4 (b) sending an instruction request to memory utilizing a texture module coupled

5   to the shader module;

6 (c) receiving additional instructions from the memory in response to the

7   instruction request utilizing the texture module;

8 (d) caching the additional instructions on the texture module;

9 (e) sending a texture request to memory utilizing the texture module in

10   accordance with the additional instructions;

11 (f) receiving texture information from the memory in response to the texture

12   request utilizing the texture module;

13 (g) caching the texture information on the texture module;

14 (h) processing a plurality of pixels with the texture information utilizing the

15   shader module in accordance with the additional instructions;

16 (i) repeating (b) – (h) in accordance with the additional instructions; and

17 (j) outputting the processed pixels upon receipt of additional instructions that

18   include a terminate instruction.